

NEW AND LITTLE KNOWN EMESINAE
(REDUVIIDAE, HEMIPTERA) IN THE
BRITISH MUSEUM (NATURAL HISTORY),
LONDON

By P. WYGODZINSKY

THE species of Emesinae described and discussed in the present paper were sent to me for study by Dr. W. E. China and N. C. E. Miller and belong to the British Museum (Nat. Hist.). My thanks are due to the gentlemen mentioned for giving me the opportunity to examine these insects.

Bagauda aurarius sp. n.

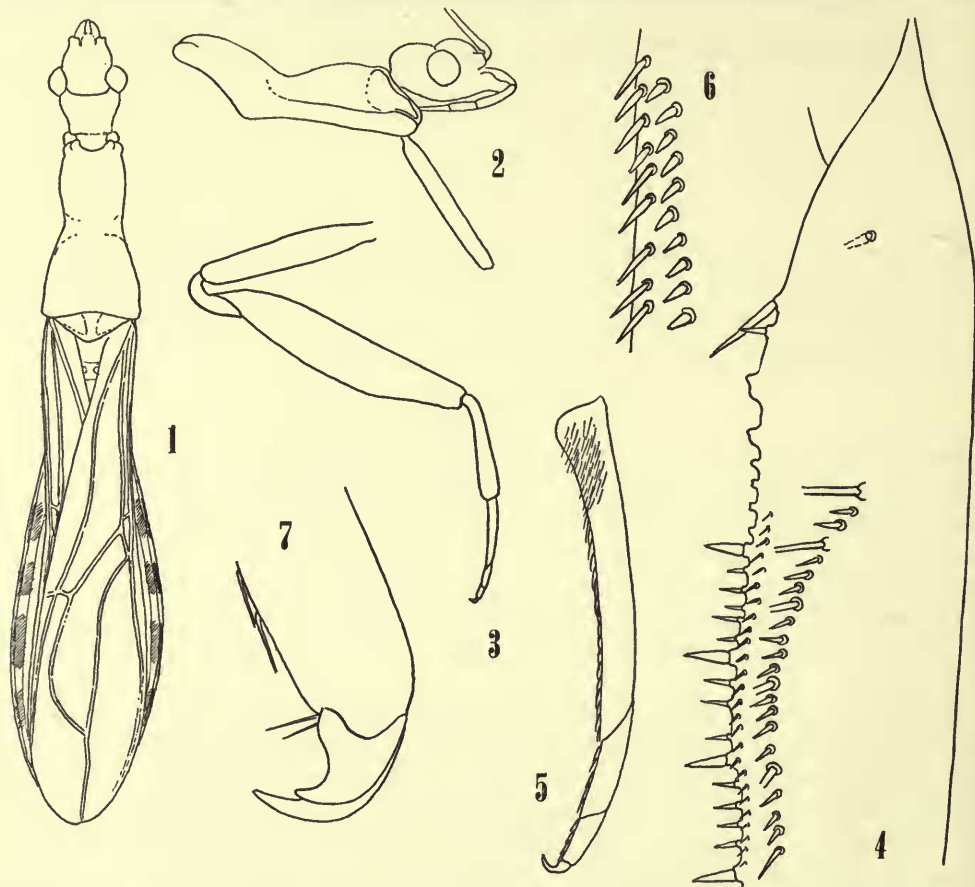
Female. Length 6.5 mm. Head, fore lobe of pronotum, coxae and abdomen ventrally, golden-brown. Hind lobe of pronotum dark brown, with a delicate line along middle, whitish; disk with 1 + 1 sublateral fasciae golden-brown. Scutellum and postscutellum dark brown. Fore wings brownish, veins dark brown, those limiting large cell, yellowish, most veins bordered with yellow; a few short stripes of the same colour on apical portion of fore wings. Connexival segment with one-third yellow and two-thirds piceous. Antennae and mid and hind legs uniformly dark brown.

Shape of head as in Text-figs. 1 and 2. Eyes rather small, subcircular in lateral aspect, not attaining level of apparent dorsal and ventral surface of head. Distance between eyes dorsally about twice their width. Shape and relative size of segments of rostrum as in Text-fig. 2. Antennae bare; second segment slightly shorter than first. Postocular portion of head with sides moderately convergent posteriorly; postero-lateral angles prominent in dorsal view; strongly declivous behind in lateral aspect.

Shape of pronotum as in Text-figs. 1 and 2. Fore and hind lobe of subequal length. Fore lobe subcylindrical, very slightly widened about middle, slightly convex above, almost smooth, without impressed longitudinal line. Hind lobe somewhat widened posteriorly, hind border slightly emarginate; surface distinctly granulose. Fore lobe laterally with a distinct longitudinal carina which attains anterior portion of hind lobe. Scutellum and postscutellum each with a rather wide median carina.

Fore wings attaining apex of abdomen, their shape and venation as in Text-fig. 1. First *r-m* cross-vein situated basad of basal angle of large discal cell; vein emanating from apex of said cell much shorter than the latter.

Legs slender. Coxa of first pair as long as fore lobe of pronotum. Femur moderately widened (Text-fig. 3). Postero-ventral series beginning at some distance from base of article, composed of several rather large spine-like setae, followed by 5 large and about 25 short spines (Text-fig. 4). Antero-ventral series widely interrupted at base (Text-fig. 4), composed of a few rather elongate spine-like setae and about 30 short spinulets. Accessory series well developed, composed of subequal



FIGS. 1-7. *Bagauda aurarius* sp. n. 1, General aspect, dorsal view; 2, head and prothorax, lateral aspect; 3, fore leg; 4, base of fore femur; 5, fore tarsus; 6, spines of under surface of fore tibia; 7, apex of fore tarsus with claws. Wygodzinsky del.

small spinulets. Tibia five-eighths as long as coxa, tarsus as long as tibia, both together slightly shorter than femur. Tibia ventrally with 2 series of spines, somewhat different in shape and size (Text-fig. 6). Tarsus as in Text-fig. 5; first segment twice as long as second and third together, at base with a fascia of short bristles and on ventral surface with a series of adpressed setae. Claws subequal in size (Text-fig. 7). Mid and hind legs moderately elongate, hind femora surpassing apex of abdomen by 2.5 mm.

Abdomen subfusiform, widest on posterior third; under surface moderately convex, subflattened on basal half.

Material examined. Gold Coast Colony, Enchi, *Capt. B. D. Peake* Coll. (1 female, holotype) Brit. Mus. 1924—368.

This new species is nearest to *B. minusculus* Villiers, 1949 from which it differs as follows:

1. Vein emanating from apex of discal cell three-quarters as long as cell; basal *r-m* cross-vein at level of basal angle of discal cell. Connexivum uniformly coloured. Mid and hind femora whitish apically. Fore tarsi with one large and one very small claw *minusculus* Villiers
- Vein emanating from apex of discal cell less than one-half the length of cell; basal *r-m* cross-vein basal of basal angle of cell. Connexivum with dark and clear spots. Mid and hind femora uniformly dark. Fore tarsi with claws subequal in size *aurarius* sp. n.

Gardena cheesmanae sp. n.

Macropterous *male* and *female*. Length 11 mm. Colour of head, thorax and abdomen, dark piceous; head somewhat clear-coloured behind eyes and at base of antenniferous tubercles. Antennae and rostrum uniformly dark. Legs dark brown, pigmentation somewhat less intense towards apex of femora and tibiae; femora of second and third pair with a wide apical and corresponding tibiae with a wide basal annulus, whitish. Fore wings greyish-brown, veins darker. Connexivum at segmental borders with a small whitish spot. Surface of head and prothorax strongly polished, bare; meso- and metathorax, legs and abdomen shining, but covered with microscopic pile, the latter rather dense on abdomen ventrally.

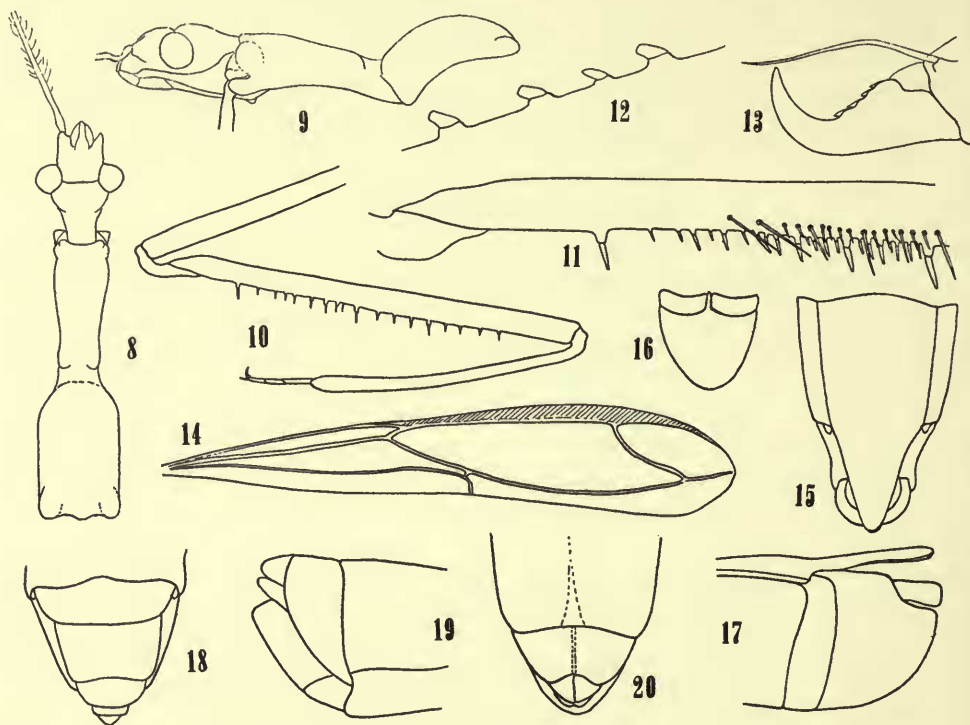
Head as in Text-figs. 8 and 9. Width of eyes of male one half, of female one third of the distance between them dorsally; in lateral view, eyes not attaining level of dorsal and ventral surface of head. Shape and relative size of segments of rostrum as in Text-fig. 9. Postocular region of head rather short, sides strongly convergent in dorsal view, distinctly detached from neck. First segment of antennae of male with not very numerous slender hairs which are hardly longer than diameter of segment, very sparse towards apex of article. Antennae of female completely bare. Length of first segment 5.8–6 mm.; relative length of segments = 1 : 0.8 : 0.12 : 0.35.

Shape of pronotum as in Text-figs 8 and 9; fore and hind lobe separated dorsally by a rather wide transverse depression; posterior border of pronotum bisinuate. Fore lobe microscopically reticulate, pilosity very sparse, posterior longitudinal furrow indistinct. Hind lobe conspicuously wrinkled, with exception of lateral borders and humeral callosities.

Fore wings almost attaining apex of abdomen; their venation as in Text-fig. 14. Hind wings complete.

Fore legs as in Text-figs. 10–13. Coxa slightly shorter than pronotum; tibia about as long as coxa, two-thirds of length of femur. Distance from first spine of postero-ventral series to base of article equal to about one-twelfth of total length of femur, or about twice the length of this spine plus its base. Postero-ventral series composed of about 5 large, 10–12 medium-sized and very numerous small spines

inserted upon very short bases. Antero-ventral series not interrupted at base, composed of long and short spine-like setae (Text-fig. 11). Spines on under surface of tibia short, peg-like (Text-fig. 12). Tarsus as usual for the genus, the three segments of subequal length; one claw with four small teeth on basal half (Text-fig. 13), the other one simple, with a deep incision at centre of under surface. Mid and hind legs without special characters; hind femora surpassing apex of abdomen by 4.5 mm.



FIGS. 8-20. *Gardena cheesmanae* sp. n. 8, Head and pronotum of male, seen from above; 9, head and prothorax, lateral view; 10, fore leg; 11, base of fore femur; 12, spines of under surface of fore tibia; 13, claw of fore leg; 14, fore wing; 15, apex of abdomen of male, seen from above; 16, hypopygium, seen from behind; 17, apex of abdomen of female, lateral view; 18, apex of abdomen of female, seen from above and behind; 19, *idem*, lateral view; 20, *idem*, ventral aspect. Wygodzinsky del.

Abdomen elongate fusiform, widest on posterior third. Ventral surface smooth, with very delicate transverse striae; longitudinal carina absent. The first three visible sternites of subequal length. Sternites II-VI of female emarginate posteriorly, hind border of sternite VII straight across; genital region of female as in Text-figs. 18-20. Sternites II-VI of male strongly emarginate behind at centre, VII moderately so, VIII almost straight across. Genital segments as in Text-figs. 15-17; last tergite slender, almost pointed apically, not completely covering genitalia from above; posterior projection of hypopygium slender, short, not surpassing level of

superior border of parameres when seen from behind (Text-fig. 16), the latter short, simple.

Material examined. Papua, Kokoda, 1,200 ft. x. 1933, L. E. Cheesman coll. (1 male, holotype) Brit. Mus. 1933—427. Dutch New Guinea, Cyclops Mts., Sabron, 2,000 ft., vi. 1936 (1 female, allotype) Brit. Mus. 1936—271.

This species, which is dedicated to its collector, belongs to a group of Oriental and Pacific species characterized by the small body size (15 mm. or less). *G. brevicollis* Stål, 1870 and *G. muscicapa* (Bergroth, 1906) are apparently nearest to *cheesmanae*. The following key shows the relationships of the species mentioned above :

1. Distance from first spine of fore femur to base of article equal to about twice the length of spine with its basal tubercle included (Text-fig. 11) 2
- Distance from first spine of fore femur to base of article equal to at least five times the length of said spine with its basal tubercle *brevicollis* Stål.
2. First article of antennae of male with dense hairs several times as long as diameter of segment, on its whole length. Fore and hind lobe of pronotum separated dorsally by a very narrow cleft ; fore lobe with very dense pile, dull appearing ; hind lobe with posterior border straight. Basal region of mid and hind tibiae with a small but distinct dark spot followed by a short white annulus. Last tergite of male relatively wide, subrounded apically *muscicapa* (Bergroth)
- First article of antennae of male on basal half with not very numerous hairs which are not much longer than diameter of segment. Fore and hind lobe of pronotum separated dorsally by a rather extensive depression (Text-fig. 8) ; fore lobe almost without pile, appearing polished ; hind lobe bisinuate at base (Text-fig. 8). Base of mid and hind tibia uniformly white. Last tergite of male rather slender, subpointed apically (Text-fig. 15) *cheesmanae* sp. n.

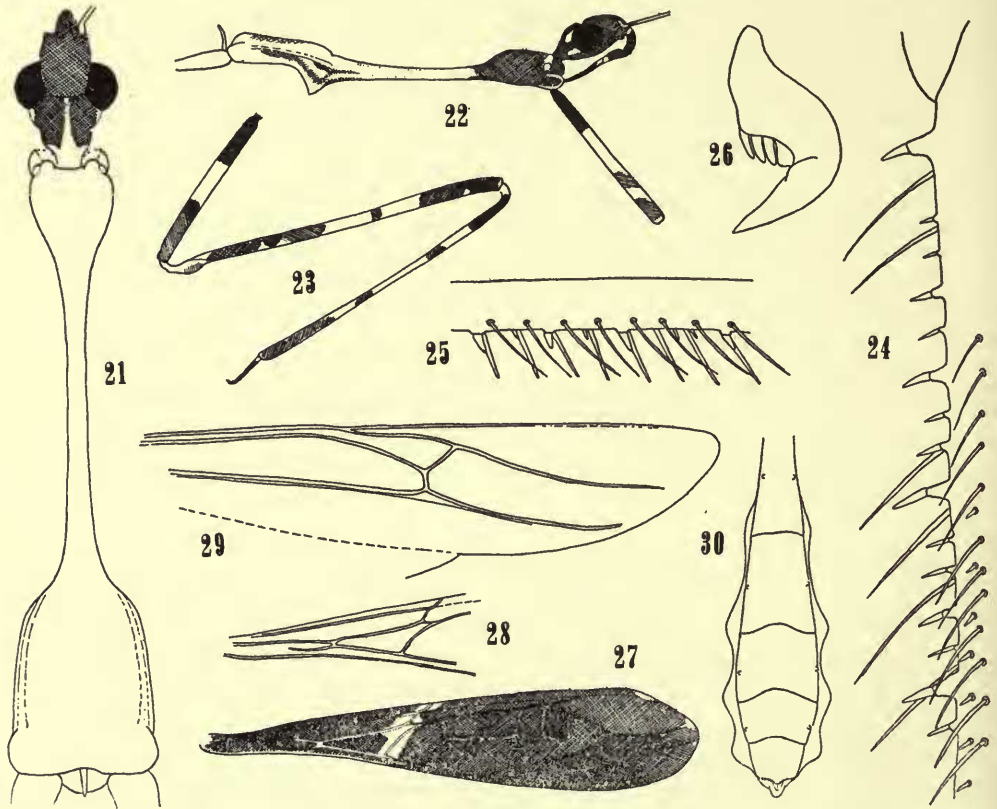
Dohrnemesa buyassuana sp. n.

Macropterous *female*. Length to apex of fore wings, 15.5 mm., of head and pronotum together, 6.8, of fore wings, 8.7 mm. General colour clear to dark brown, pattern elements yellowish to white. Body almost bare, some regions with sparse relatively long hairs, especially distinctive on pronotum, ventral surface of meso- and metathorax, and apex of abdomen ventrally.

Shape of head as in Text-figs. 21 and 22. Postocular region without dorsal projections, bisinuate laterally, moderately declivous in lateral view ; a few long hairs behind eyes. The latter large, circular in lateral view, not attaining level of dorsal or ventral surface of head ; their distance dorsally only very slightly larger than their width. Shape and relative size of rostral segments as in Text-fig. 22. Antennae slender, bare ; length of first segment, 6.5 mm. ; relative length of segments: 1 : 0.95 : 0.2 : ?. Head dark brown, with 2 + 2 yellowish spots behind eyes sublaterally ; neck dorsally and a slender longitudinal line on dorsal surface of postocular portion, yellow. Rostrum piceous, with extreme base of first, apex of second and base of third segment, yellowish. First segment of antennae yellow, with one extremely short basal, one medium sized sub-basal and apical, and two wide submedian annuli, dark brown ; distance between submedian annuli shorter than their width. Second segment yellowish white, with one sub-basal, two submedian and one subapical annulus, dark brown, these annuli progressively larger towards apex ;

distance between annuli as wide as (the two basal) or shorter than (the two apical) annuli. Third segment dark brown, extreme apex whitish.

Shape of pronotum as in Text-figs. 21 and 22. Petiole very slender, not distinctly detached from fore lobe, almost twice as long as hind lobe; the latter with sides almost parallel, accompanied sublaterally on disk by 1 + 1 faint but distinct carinae; humeri very slightly elevated only; hind border faintly emarginated. Scutellum with a rather long spine, metanotum with a very short projection. Colour of fore



FIGS. 21-30. *Dohrnemesa buyassuana* sp. n. 21, Head and thorax, seen from above; 22, head and pronotum, lateral view; 23, fore leg, with colour pattern; 24, base of fore femur, ventral portion; 25, spines of under surface of fore tibiae; 26, fore claw; 27, fore wing, with colour pattern; 28, part of venation of fore wing; 29, venation of hind wing; 30, abdomen, seen from below. Wygodzinsky del.

lobe darker, of hind lobe clear brown, petiole mainly yellowish, with a delicate dark stripe dorsally; carinae of hind lobe yellowish, shining, rest of surface of hind lobe dull, slightly wrinkled transversally on anterior third. Scutellum with spine yellowish, metanotum dark brown. Lateral and ventral surface of meso- and meta-thorax dark brown, with rather dense short silvery adpressed hairs, partially arranged in fasciae.

Fore legs very slender (Text-fig. 23). Coxa slightly longer than petiole of pronotum. Postero-ventral series of femur beginning almost at base of article, composed of about 10 larger and 40 smaller setiferous tubercles beset with short spines, the spines of the larger tubercles about as long as their bases, those of short tubercles longer than the latter (Text-fig. 24). Large tubercles together with their apical spines somewhat shorter than half the length of diameter of segment. Antero-ventral series composed of very short spines. Ventral surface of femur furthermore with two series of long slender strongly sclerotized setae. Tibia ventrally with one row of about 55 short spines of two sizes (Text-fig. 25), and two series of long setae. Tarsus short, as usual for the genus, claws with several appendages on basal half (Text-fig. 26). Mid and hind legs slender, elongate, bare; hind femora surpassing apex of fore wings by 10 mm. Fore legs yellowish white, with dark annuli as in Text-fig. 23. Mid and hind coxae dark brown; femora yellowish, with 5-6 dark annuli along their whole length, distance between them about as wide as annuli, apex whitish; tibiae yellowish-white, on basal half with 4 dark annuli, the first sub-basal one very narrow, the remaining ones wider, but shorter than the distance between them.

Fore wings surpassing apex of abdomen by about 1 mm.; their venation as in Text-figs. 27 and 28; basal discal cell elongate apically, *cu-an* cross-vein situated basad of apex of cell. Colour of fore wings rather uniformly dark brown, large discal cell and apex of wing with faint coarse yellowish reticulation; apical region of basal discal cell with a diagonal whitish spot which attains both margins. Veins dark or whitish, as in Text-fig. 27. Hind wings complete, their venation as in Text-fig. 29.

Abdomen slender at base, somewhat widened posteriorly, connexival margin undulate (Text-fig. 30); projections of last three segments the largest, identical in size. Colour of abdomen piceous ventrally, with a few yellowish spots on posterior half; connexival segments with alternate piceous and yellowish-white portions.

Material examined. Paraná de Buyassú, Lower Amazon, 17.i.1896, *E. E. Austen* Coll. (1 female, holotype) Brit. Mus. 1896-80.

This species differs from *D. santosi* Wygodzinsky, 1945, and *D. lanei* Wygodzinsky, 1945 (both from southern Brazil) by the much longer petiole of the pronotum, the distinctly undulate connexival margin and the very different colour pattern of the fore wings; it differs furthermore from *santosi* by the *cu-an* cross-vein inserted basad of the apex of the basal discal cell and from *lanei* by the small size of the larger setiferous processes of the fore femora, in addition to other characters.

Dohrnemesa exporrecta sp. n.

Macropterous *male*. Length to apex of fore wings, 11 m. Conspicuously pictured, with pattern elements from white to clear brown and piceous. Very short hairs only present.

Shape of head as in Text-figs. 31 and 32. Antecular portion moderately convex above; postocular region dorsally behind eyes somewhat salient laterally, strongly elevated at centre and with a short slender spine-like projection; rather strongly

declivous behind. Distance between eyes dorsally distinctly less than their width; eyes rounded in lateral view, slightly surpassing level of inferior margin of head. Size and shape of rostral segments as in Text-fig. 32; second as long as first, slightly thickened anteriorly. Antennae not examined. Colour of head piceous, a small spot behind eyes laterally, apex of central dorsal projection, and a slender line on postocular region dorsally, whitish; clear brown at insertion of rostrum. First segment of rostrum whitish at base and apex, brown centrally; second segment piceous, white on apical third; third segment dark brown, white on basal third.

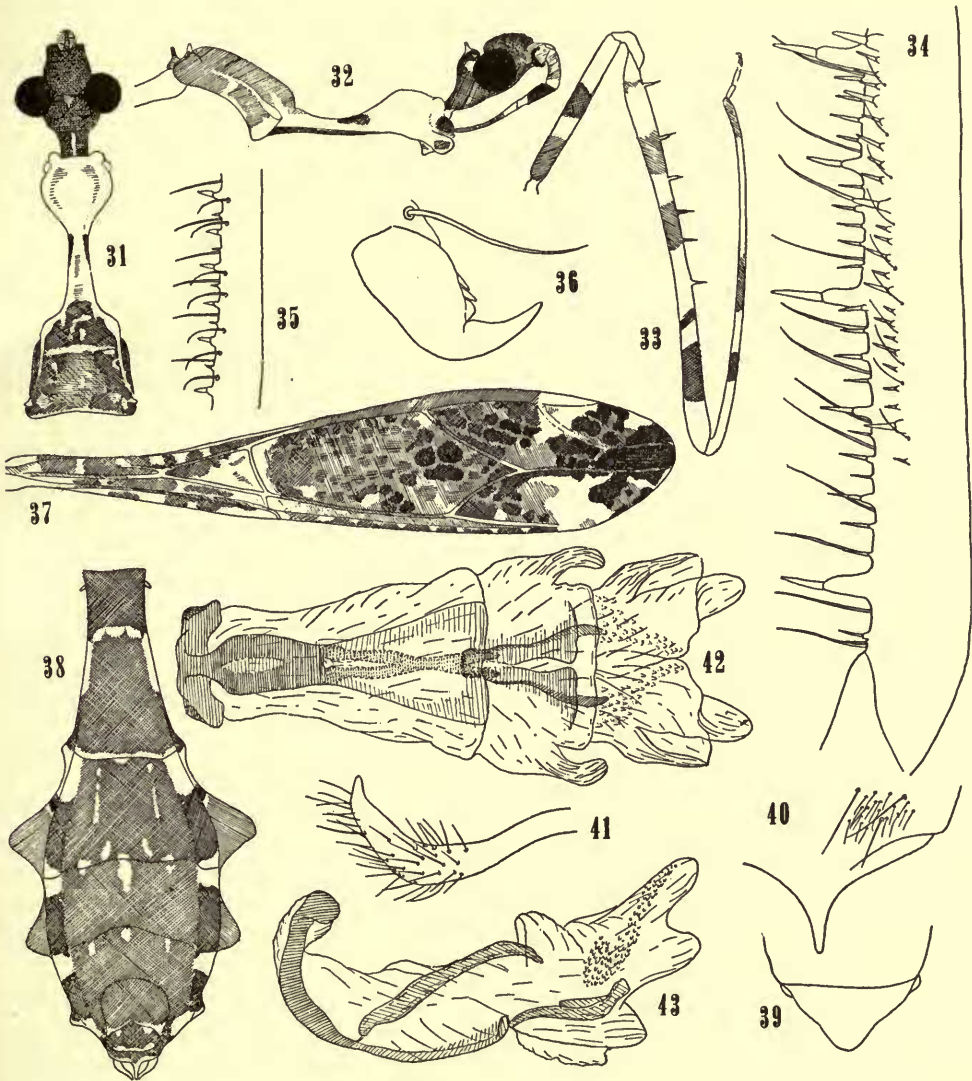
Pronotum as in Text-figs. 31 and 32. Fore lobe subglobular in dorsal view, rather sharply detached from petiole, about as long as the latter. Hind lobe three-fourths as long as fore lobe and pedunculate portion together, its sides slightly diverging posteriorly; humeri with 1 + 1 short but distinct spine-like projections; posterior border slightly emarginate. Disk smooth, sublaterally with 1 + 1 carinae which are most distinct anteriorly. Scutellum with a very short spine; spine of metanotum present, its length? (broken). Fore lobe and petiole whitish, the former with a faint brownish tinge, the latter with 1 + 1 lateral elongate piceous patches anteriorly, dorsally and posteriorly with a faint brownish longitudinal fascia. Hind lobe dark brown to piceous, rather irregularly mottled with whitish; carinae and apex of humeral spines, white. Scutellum with spine dark brown, its hind margin very narrowly white. Metanotum dark brown, whitish at insertion of spine. Pattern of prothorax laterally as in Text-fig. 32; meso- and metathorax piceous laterally and ventrally, hind border of mesothorax broadly whitish at sides.

Fore legs as in Text-fig. 33. Coxa as long as fore lobe and petiole of pronotum together. Postero-ventral series of femur beginning at base of article, composed of 6 large and approximately 45 medium-sized and small spiniferous tubercles (Text-fig. 34); spines of large tubercles about as long as the latter, those of small ones considerably longer relatively; large tubercles together with spines as long as diameter of segment. Antero-ventral series not interrupted at base, composed of 12-14 medium-sized spiniferous projections and about 70 small and very small slender spines inserted upon very short bases, these spines become slightly longer towards apex of segment. Setae accompanying antero-ventral series very short and slender, almost indistinguishable from ordinary hairs, those accompanying postero-ventral series large as usual for the genus. Ventral surface of tibia with about 70 small spines of roughly two sizes (Text-fig. 35), arranged in a single series, accompanied by two rows of long setae. Fore tarsus and claws as usual for the genus (Text-fig. 36). Mid and hind legs not examined. Colour of fore legs white, with brown and piceous annuli as in Text-fig. 33.

Fore wings surpassing apex of abdomen by about 1 mm., their shape and venation as in Text-fig. 37. Basal discal cell only slightly elongated at inner apical angle; *cu-an* cross-vein inserted very little basad of apex of cell. General colour of fore wings clear brown, mottled with dark brown and piceous; apical two-thirds of basal discal cell with adjacent regions and 1 + 1 large spots laterally beyond apex of discal cell, white. Venation of hind wing as shown for *buyassuana*.

Abdomen as in Text-fig. 38, shortly pedunculate at base, widened on apical two-thirds, with connexival segments strongly lobate, most conspicuously so on segment

V. Spiracles of segment III shortly pedunculate, the remaining sessile. Dorsal or ventral projections lacking. Ventral surface flattened on anterior, moderately convex on posterior half. Hypopygium short, covered dorsally by the subtriangular eighth tergite (Text-fig. 39), posteriorly with a spine-like upwardly directed pro-



FIGS. 31-43. *Dohrnemesa exporrecta* sp. n. 31, Head and pronotum, dorsal view; 32, head and prothorax, lateral aspect; 33, fore leg, with colour pattern; 34, base of fore femur; 35, spines of ventral surface of fore tibia; 36, claw of fore leg; 37, fore wing, with colour pattern; 38, abdomen, seen from below; 39, apex of abdomen of male, seen from above; 40, apex of hypopygium, high magnification; 41, paramere; 42, phallus, dorsal view; 43, *idem*, lateral aspect. Wygodzinsky del.

jection at centre (Text-fig. 40). Shape and chaetotaxy of parameres as in Text-fig. 41. Shape and structure of phallus as in Text-figs. 42 and 43.

Material examined. St. Vincent, West Indies, *H. H. Smith* Coll. (1 male, holotype) Brit. Mus. 1895—206.

This insect differs from the species included heretofore in *Dohrnemesa* by numerous characters, such as the much shorter pronotum, the wide abdomen with its flaring connexival segments, the distinctly spined humeri, the almost inconspicuous row of long setae accompanying the antero-ventral series of the fore femora, and the smaller size. "*Westermannia*" *difficilis* Dohrn, 1860 (Colombia) is apparently nearly related to the present species, but to judge from its colour characters it is clearly distinct. "*Westermannia*" *difficilis* sensu Champion, 1898, is equally different, as shown by the figures given by that author, though it doubtlessly belongs to the same group.

Stenolemus eucnemus sp. n.

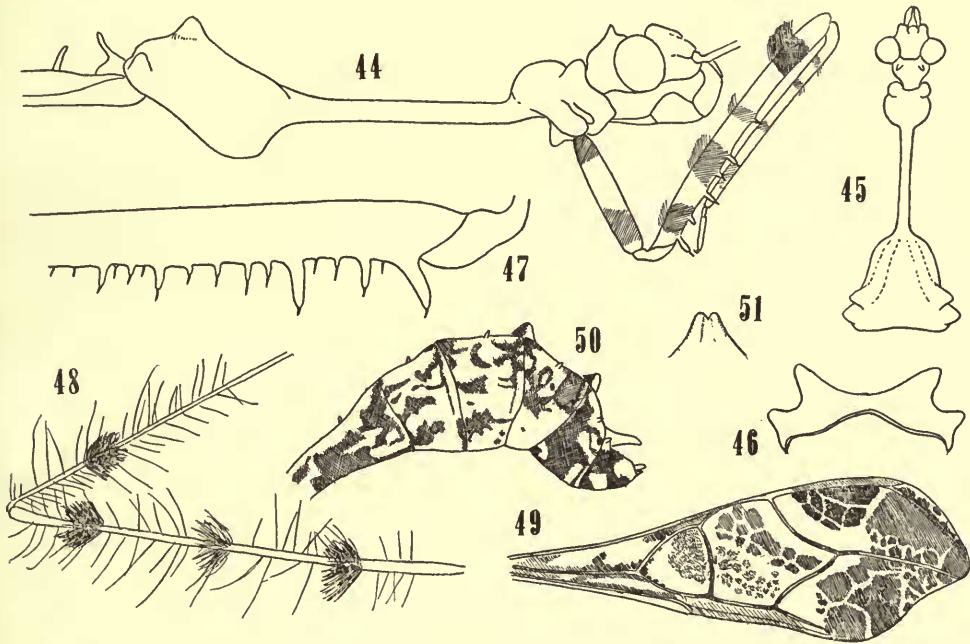
Male. Length to apex of fore wings, 11.2 mm. General colour whitish, pattern elements clear to dark brown. Body surface with rather short and not very dense pubescence; long hairs present in small number only.

Head as in Text-figs. 44 and 45, short. Anteocular region strongly elevated; postocular region behind constriction dorsally with 1 + 1 pointed cone-shaped projections. Eyes very large; their distance dorsally equal to their width; their outline almost circular in lateral view, slightly surpassing level of inferior border of head. Rostrum as in Text-fig. 44; second segment as long as first, very strongly swollen; third very slender. Antennae slender; first and basal third of second segment with a moderate number of long erect hairs; rest with short pubescence only. Length of first segment 3.2 mm.; relative length of segments = 1:0.9:0.15:?. Colour of head piceous, with most of anteocular region dorsally, apex of postocular projections and a median longitudinal line dorsally on postocular portion, yellowish. Rostrum brown, base and apex of first and apex of second segment, yellow. First segment of antennae yellowish, with three narrow brown annuli, one sub-basal, one submedian and one subapical; second segment whitish, with three black annuli: one very narrow sub-basal, one wider submedian and one very wide subapical, the latter separated from apex of segment by a narrow white annulus as wide as the sub-basal brown one; third segment brown, with extreme apex whitish.

Shape of prothorax as in Text-figs. 44 and 45. Fore lobe of pronotum very small, globular, distinctly detached from petiole; the latter more than twice as long as fore, and as long as hind lobe, very slender, cylindrical. Hind lobe bell-shaped, its sides distinctly divergent towards rear, with 2 + 2 stout projections, those of disk divergent, somewhat larger than the lateral ones (Text-fig. 46). Disk with a distinct median longitudinal depression limited by 1 + 1 wide rounded carinae which lead to the submedian projections. Spines of scutellum and metanotum of medium size, subcylindrical, with inconspicuous pubescence only. Thorax without long hairs, its general colour yellowish-white; petiole and fore lobe of pronotum with faint clear brown pattern elements dorsally; lateral and ventral surface of meso-

and metathorax piceous, scutellum and metanotum dark brown, posterior border of scutellum and extreme apices of spines, yellowish. Surface of pronotum polished.

Fore legs as in Text-figs. 44 and 47; coxa slightly shorter than hind lobe of pronotum. Large spiniferous processes of femur as in Text-fig. 57, the first inclined towards base, larger than any of the others, followed by another projection almost as large, and 2-3 smaller ones, in addition to the usual short spiniferous projections; total number of spines of postero-ventral series 17. Colour of fore legs yellowish, with brown annuli as in Text-fig. 44, preapical annulus the darkest. Dark annuli of femur and base of tibia accompanied dorsally by tufts of dark hairs; rest of fore legs with short pile and isolated long hairs. Femur of second pair with 3



FIGS. 44-51. *Stenolemus eucnemus* sp. n. 44, Head and thorax, lateral view, only fore leg with colour pattern shown; 45, head and pronotum, dorsal view; 46, processes of hind lobe of pronotum, seen from behind; 47, base of fore femur; 48, femur and part of tibia of second pair of legs; 49, fore wing; 50, abdomen of male, lateral view; 51, apex of process of hypopygium. Wygodzinsky del.

brush-like tufts of medium-sized hairs (Text-fig. 48), the sub-basal and subapical one piceous, the submedian one clear brown; mid tibia with one piceous sub-basal tuft. Hind femora with 4 tufts, the two basal and the subapical one piceous, the third tuft clear brown.

Fore wings rather wide, surpassing apex of abdomen by 2 mm., their shape and venation as in Text-fig. 49, their colour white, pattern elements from clear brown to piceous, their distribution as in Text-fig. 49. Hind wings brownish-white, somewhat darker at apex, their veins dark brown.

Abdomen as in Text-fig. 50, without dorsal or ventral projections; connexival

angles somewhat salient, the two last lobate. Posterior projection of hypopygium broad, with a short median emargination apically (Text-fig. 51). Colour of abdomen yellowish-white, with extensive piceous pattern as in Text-fig. 50. Surface smooth, almost shining, with sparse short pile and isolated long hairs.

Material examined. New Guinea, *ter Porten* Coll. (1 male, holotype).

Stenolemus eucnemus is apparently related to *S. muiri* (Kirkaldy, 1908) from Fiji, but differs from that species by the smaller number and different colouring of the tufts on mid and hind legs, the absence of wool-like pile on the body, the different colouring of fore wings and abdomen, and the differently shaped process of the hypopygium.

Stenolemus facetus sp. n.

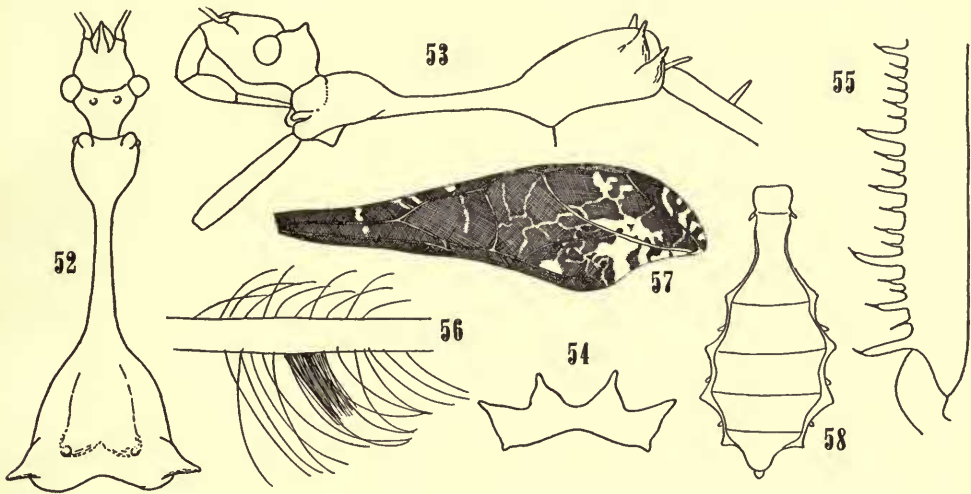
Male. Length 11.5 mm. General colour dark brown, pattern elements yellowish white and silvery. Various body regions with short woolly pile; long hairs sparse.

Shape of head as in Text-figs. 52 and 53, subfusiform in lateral view. Postocular region short, with 1 + 1 small but distinct tubercles, strongly declivous behind tubercles, in lateral aspect. Eyes very small, subcircular in outline, far remote from level of dorsal and ventral surface of head, in lateral view; distance between eyes dorsally equal to twice their width. Shape of rostrum as in Text-fig. 53, second segment very slightly swollen only. Head covered with short woolly pile; only a few moderately long hairs present. Colour of head dark brown, with a faint median longitudinal stripe on postocular region dorsally, yellowish. Rostrum clear brown, apex of segments yellowish. Length of first segment of antennae 3.8 mm.; relative length of segments = 1 : 1 : 0.21 : 0.32. Segments I and II with numerous erect isolated very long hairs; III and IV with hairs not longer than diameter of segment. Colour of antennae dark brown, first segment with 2 or 3 rather wide faint yellowish annuli, second segment with 3 or 4 more distinct whitish annuli which are slightly shorter than the dark spaces between them; third uniformly dark, fourth uniformly clear coloured.

Pronotum as in Text-figs. 52 and 53. Fore lobe small, sides regularly convergent towards rear; petiole elongate, twice as long as fore and about as long as hind lobe, slender, distinctly widened posteriorly; hind lobe bell-shaped, its posterior border distinctly emarginate, disk with 2 + 2 rather large projections, wide at base. slender and pointed apically (Text-fig. 54); disk slightly flattened before submedian projections. Spine of scutellum inclined, of metanotum erect, both slender. Anterior and especially posterior lobe of pronotum covered with short wool-like pile, petiole almost bare, shining. Long hairs in moderate number on petiole and hind lobe. Meso- and metathorax with woolly pile. Colour of thorax dark brown, pile yellowish-brown; tubercles of collar clear brown; hind lobe at posterior margin centrally with a small yellowish spot. Meso- and metanotal spine dark brown.

Fore legs relatively large and slender. Coxa about as long as hind lobe of pronotum. Postero-ventral series of femur composed of 5-6 large and about 30 smaller spiniferous processes; basal process inserted at base of article, somewhat inclined towards base, about as long as diameter of segment and slightly longer and stronger than any of the remaining processes. Antero-ventral series not interrupted at base,

composed of about 5 small and 35 very small spinulets inserted upon short bases. Tibia with about 40 rather long spines arranged in two irregular series. Colour of fore legs clear brown inclusive spiniferous processes of femora; coxa with one large median and one short apical annulus, yellowish; trochanter yellow; femur with four wide yellowish annuli, one sub-basal, two submedian and one apical; tibia with 4 or 5 faint yellowish annuli; tarsi yellowish. Moderately long hairs present on all segments, not forming tufts. Mid and hind legs slender; hind femora surpassing apex of fore wings by about 4 mm. Long hairs isolated. Femora II with a dorsal tuft somewhat basad of middle (Text-fig. 56); femora III with a similar though smaller dorsal tuft sub-basally and a large tuft occupying both surfaces at



FIGS. 52-58. *Stenolemus facetus* sp. n. 52, Head and pronotum, seen from above; 53, *idem*, lateral view; 54, processes of posterior lobe of pronotum, seen from behind; 55, base of fore femur; 56, portion of femur of second pair of legs; 57, fore wing; 58, abdomen of male, dorsal view. Wygodzinsky del.

centre. Tibiae II and III at some distance from base with a tuft occupying both surfaces. Colour of femora and tibiae dark brown, somewhat clearer towards base of femora and on apical half of tibiae; annuli very faint; tufts dark brown.

Shape and venation of fore wings as in Text-fig. 57; posterior discal cell not subdivided. Pattern of fore wing as in Text-fig. 57; general colour dark brown; reticulation of cells yellowish; large clear spots silvery white, nacreous. Hind wings entirely dark brown, veins and faint reticulation slightly clearer. Fore wings surpassing apex of abdomen by about 1 mm.

Abdomen widely oval, shortly pedunculate at base (Text-fig. 58); angles of connexival segments salient; spiracles inserted on ventrally situated conical projections; other dorsal or ventral projections lacking. Ventral surface with short woolly pile and not very numerous long hairs. Colour dark brown, connexivum partly yellowish. Posterior projection of hypopygium short, truncate apically.

Material examined. Philippinen, *Boettcher* (1 male, holotype, ex Taeuber coll.) Brit. Mus. 1949—474.

Stenolemus facetus sp. n. seems to be most nearly related to *S. plumosus* Stål, 1870, equally from the Philippine Islands. The two species may be distinguished by the following set of characters :

1. Petiole of pronotum longer than hind lobe. Petiole dorsally, processes of hind lobe, and spine of scutellum, mainly whitish. Spiniferous processes of fore femora, whitish. Femur II without, femur III with two complete tufts of dark hairs. Articulation of hind femora and tibiae broadly white *plumosus* Stål
- Petiole of pronotum not longer than hind lobe. Petiole dorsally, processes of hind lobe and spine of scutellum, dark brown. Spiniferous processes of fore femora, dark brown. Femur II with one dorsal, femur III with one dorsal and one complete tuft of dark hairs. Articulation of hind femora and tibiae brown *facetus* sp. n.

Stenolemus ornatus shinyanga subsp. n.

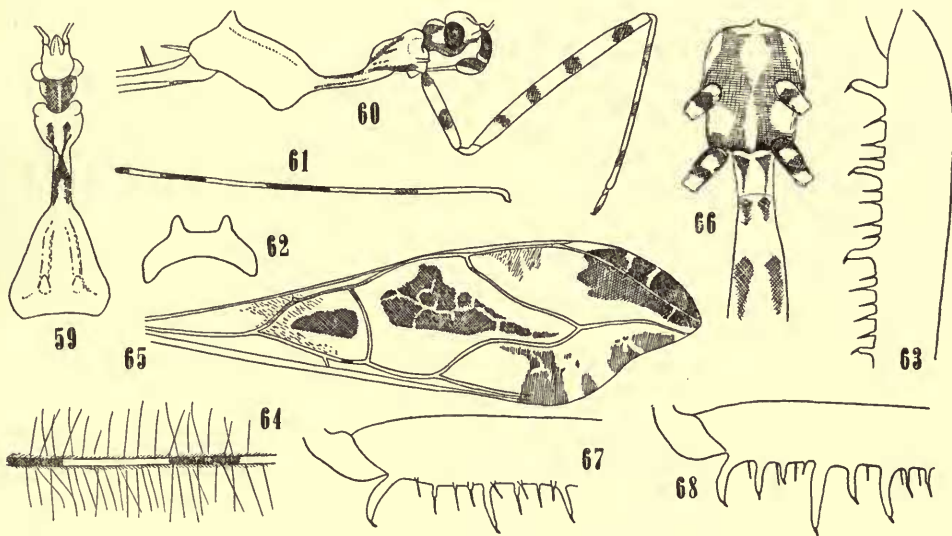
Female. Length to apex of fore wings 15 mm. General colour yellowish white, pattern elements brown. Hairs long, not very numerous.

Head as in Text-figs. 59 and 60. Distance between eyes dorsally one and a half times their width ; in lateral aspect, eyes not attaining level of dorsal or ventral surface of head, their shape subsemicircular. Postocular portion of head rather high, with a faint median longitudinal sulcus dorsally, without distinct projections. Rostrum as in Text-fig. 60 ; first segment stout, second moderately swollen, third slender. First segment of antennae with numerous very long hairs, the remaining with short pile only. Length of first segment 4 mm.; relative length of segments = 1 : 0.8 : 0.17 : ? Under surface of head dark ; dorsal surface whitish before eyes, dark behind, with a median longitudinal stripe dorsally and a spot behind each eye laterally, whitish. Rostrum dark ; first segment apically, second apically and ventrally, third entirely, whitish. Antennae of the general colour ; first segment with four dark brown annuli, one very narrow apical, one very wide subapical, another one submedian, and one medium-sized sub-basal, the latter somewhat clearer than the remaining ; second segment with one very narrow basal, one wide apical and two wide submedian annuli, the white spaces between them shorter than the dark ones ; third segment entirely brown.

Pronotum as in Text-figs. 59 and 60. Fore lobe approximately bell-shaped, narrower towards rear ; pedunculate portion slightly longer than fore lobe ; hind lobe subtriangular, near posterior border with 1 + 1 rather short cone-shaped projections (Text-fig. 62) ; disk flattened above at centre, depressed portion limited by 1 + 1 rather wide low carinae which terminate posteriorly at projections ; hind margin of pronotum almost straight across. Spine of scutellum slender, pointed apically, almost horizontal ; metanotal spine erect, slightly thickened at apex. Pronotum of the general body colour, petiole darkened above, fore lobe dorsally with 1 + 1 submedian dark irregularly shaped stripes, also somewhat darkened below. Spines of scutellum and metanotum white.

Fore legs as in Text-figs. 60 and 63. Coxa somewhat shorter than fore lobe and petiole of pronotum together. Femur slender. Postero-ventral series composed of

5 large and 25 smaller spiniferous projections; basal process inserted at a slight distance from base of article, inclined towards the latter, slightly larger than any of the others. Antero-ventral series not interrupted at base, composed of about 40 subequal spinulets inserted upon short bases. Tibiae with about 30 short spines arranged in two irregular series. Dark annuli of fore legs as in Text-fig. 60. Mid and hind legs slender; hind femora surpassing apex of fore wings by about 3 mm. Colouring of coxae as in Text-fig. 66. Trochantera whitish. Femora with five dark annuli (apices and bases white), the two sub-basal annuli on femur II rather short, clear brown, the three remaining ones and all annuli of hind femora, wide, dark brown. Tibiae with an indistinct brown spot at base, followed by a wide white and a wide brown annulus, rest of tibiae yellowish-white. Hairs of mid and



FIGS. 59-68. *Stenolemus ornatus shinyanga* subsp. n. 59, Head and pronotum, seen from above; 60, head and prothorax, lateral view; 61, colour pattern of first antennal segment; 62, processes of posterior lobe of pronotum, seen from behind; 63, base of fore femur; 64, portion of hind femur; 65, fore wing; 66, meso- and metathorax and base of abdomen, ventral aspect. 67, *Stenolemus edwardsii*, base of fore femur. 68, *Stenolemus papuensis*, base of fore femur. Wygodzinsky del.

hind legs very long, moderately numerous, their arrangement identical on clear and dark portions (Text-fig. 64).

Shape and venation of fore wings as in Text-fig. 65; posterior cell not subdivided. Pattern of fore wing as in Text-fig. 65; hind wings whitish, slightly darkened at apex. Fore wings surpassing apex of abdomen by about 3 mm.

Abdomen slender, fusiform, widest on posterior third; angles of connexival segments not salient. Spiracles inserted on small cone-shaped projections. Dorsal or ventral processes lacking. Colour of anterior portion of abdomen ventrally mainly clear, on posterior half mainly dark.

Material examined. Tanganyika, Old Shinyanga, at light, 5.vi.1953, *E. Burt* Coll. (1 female, holotype).

The present specimen is very similar to *Stenolemus ornatus* Villiers, 1949 (Belgian Congo). However, it is very considerably larger than the type of *ornatus* (15 versus 9 mm.) which is much more than the normal range of variability in species of the present genus. The remaining characters given in the rather short description of Villiers' species agree with those found in the specimen from Tanganyika, though a detailed comparison might show additional differences. Under these circumstances, a subspecific status for the insect examined now seems justified.

Stenolemus papuensis Horváth

Material examined. Kokoda, Papua, 1,200 ft., v, vi, viii and ix.1933, *L. E. Cheesman* Coll. (3 males, 1 female) Brit. Mus. 1933—427.

The specimens agree quite well with Horváth's 1914 original description. *S. papuensis* is very much like *edwardsii* Bergroth, 1916, now known to be widely distributed over Australia. The main difference is found in the size and distribution of the spiniferous processes of the fore femora: in *edwardsii*, the basal process of the postero-ventral series is slightly but distinctly longer than any of the others (Text-fig. 67), whilst in *papuensis* the third process is decidedly the largest (Text-fig. 68); in *edwardsii* the large spiniferous processes also seem to be somewhat more numerous.

